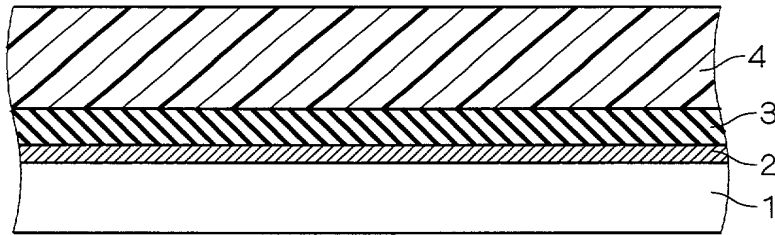
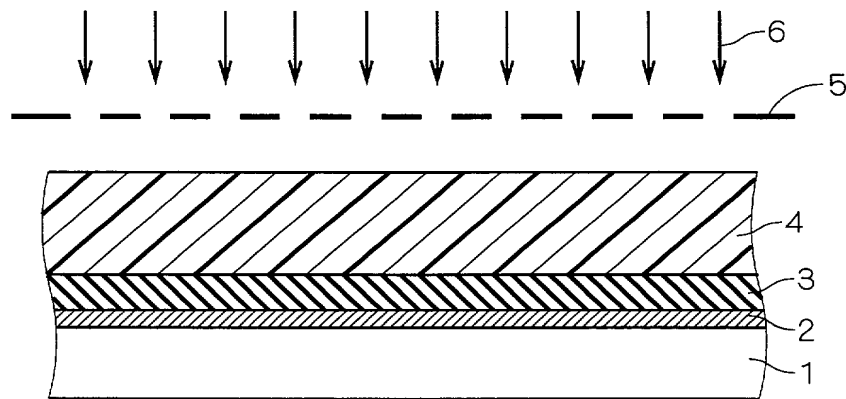


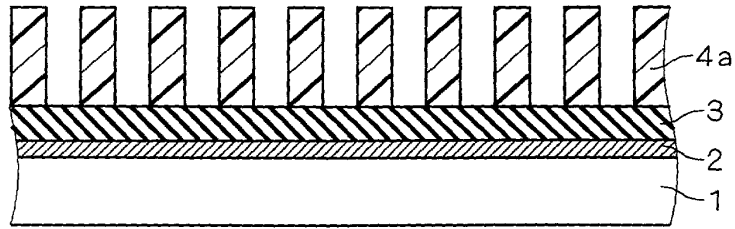
F I G . 1



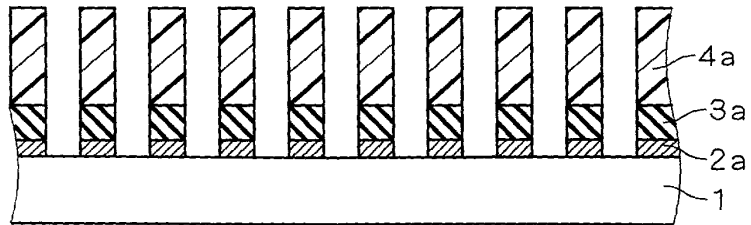
F I G . 2



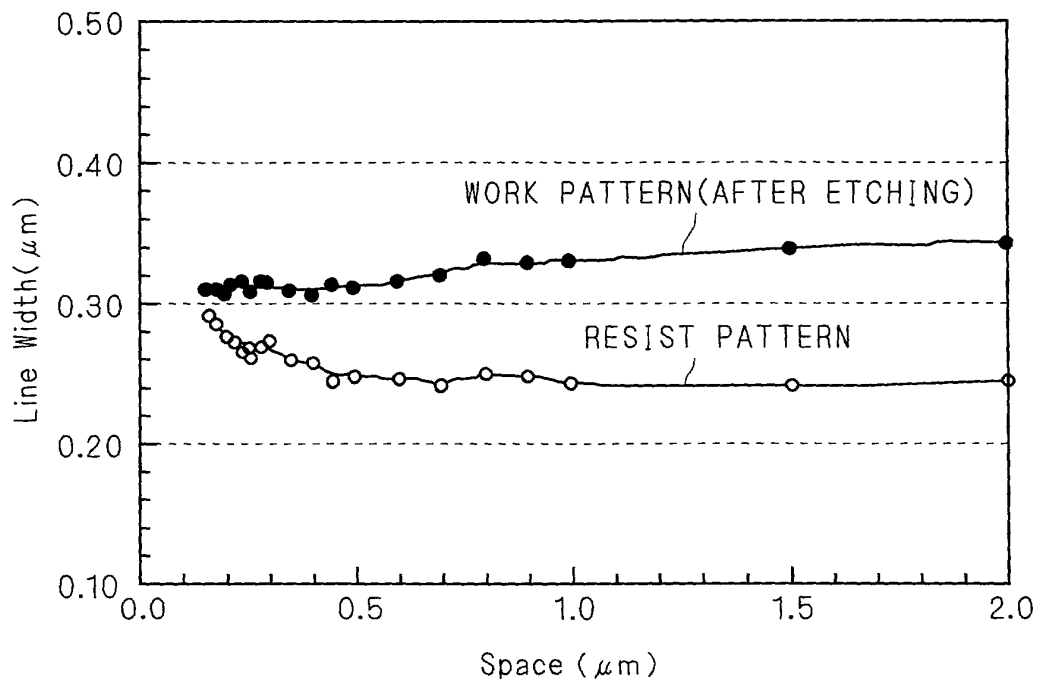
F I G . 3



F I G . 4



F I G . 5



F I G . 6

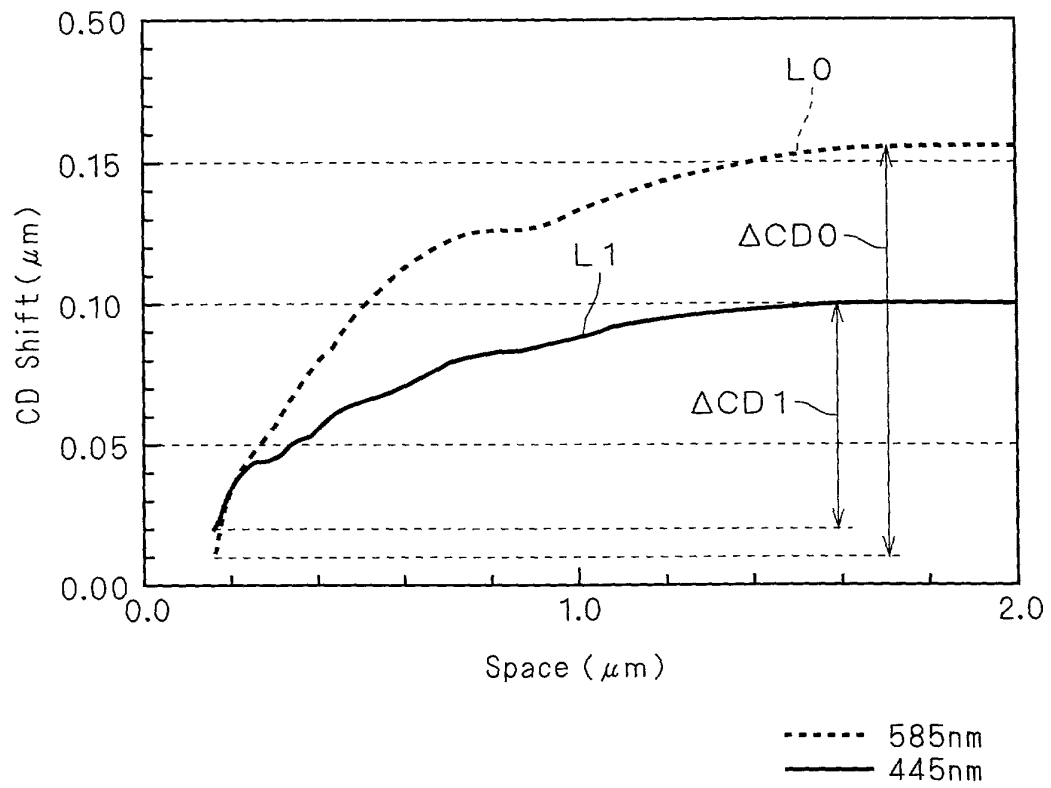


FIG. 7

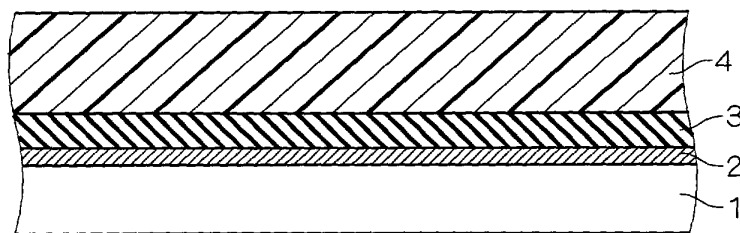
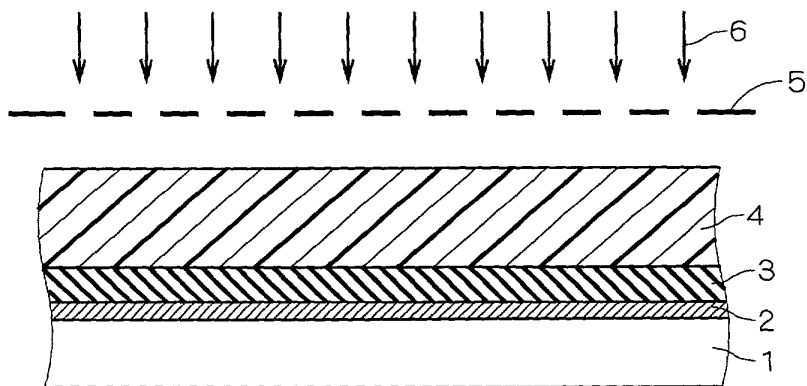
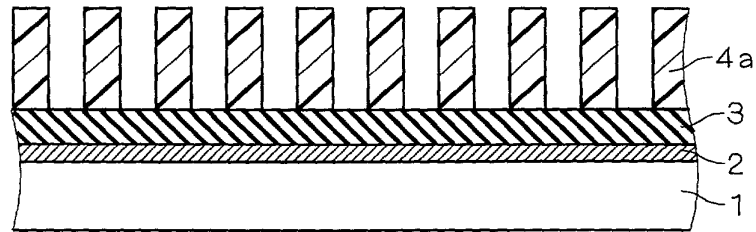


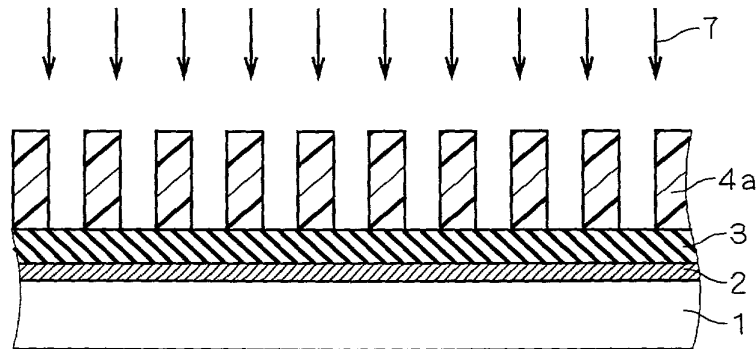
FIG. 8



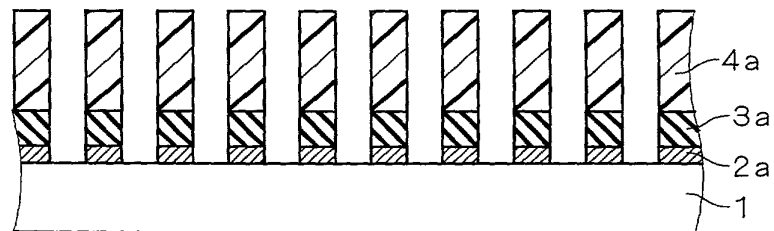
F I G . 9



F I G . 10



F I G . 11



00415396-022704
FIG. 9

F I G . 12

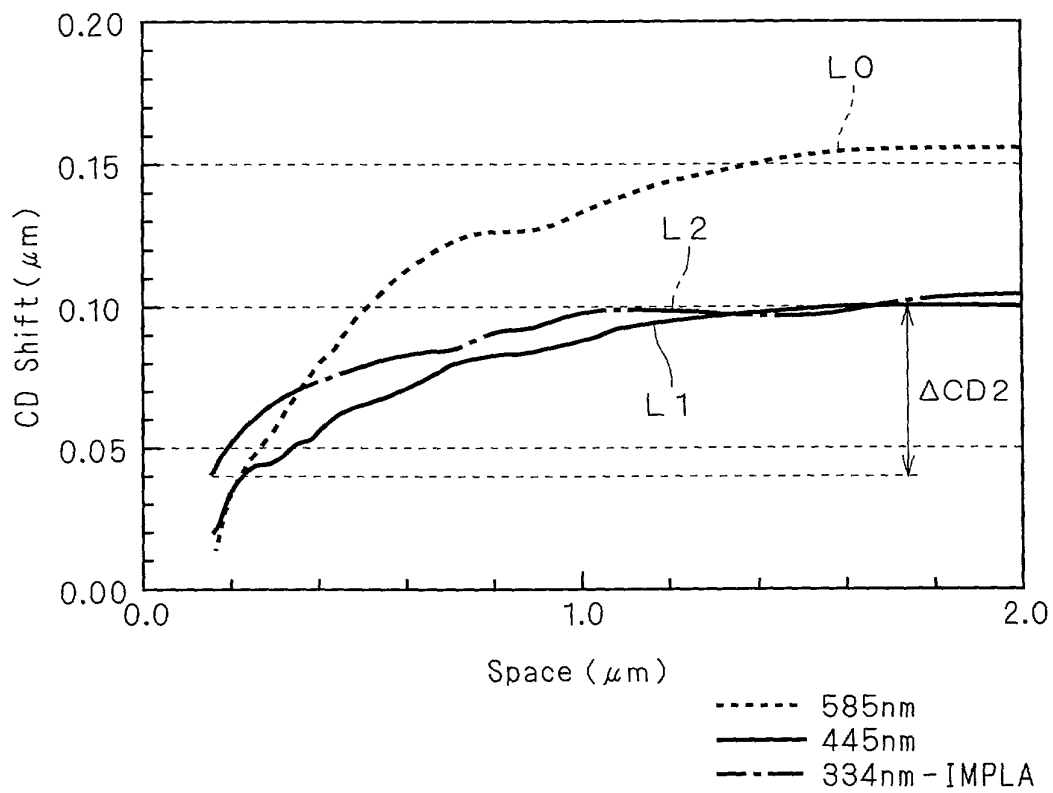
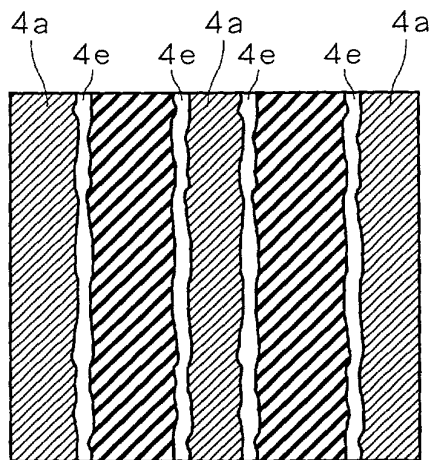
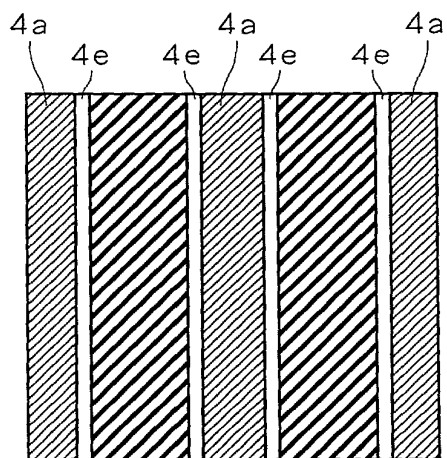


FIG. 13



RESIST PATTERN AFTER DEVELOPMENT

FIG. 14



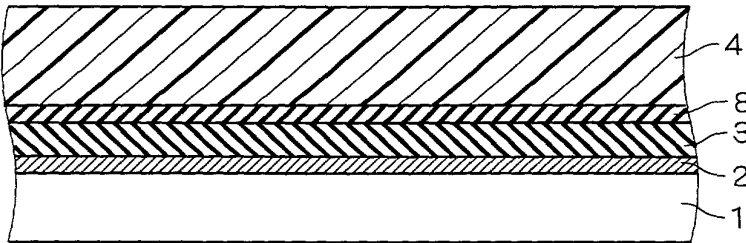
RESIST PATTERN
AFTER Ar ION IMPLANTATION

09946396-092704
T04270-9651660

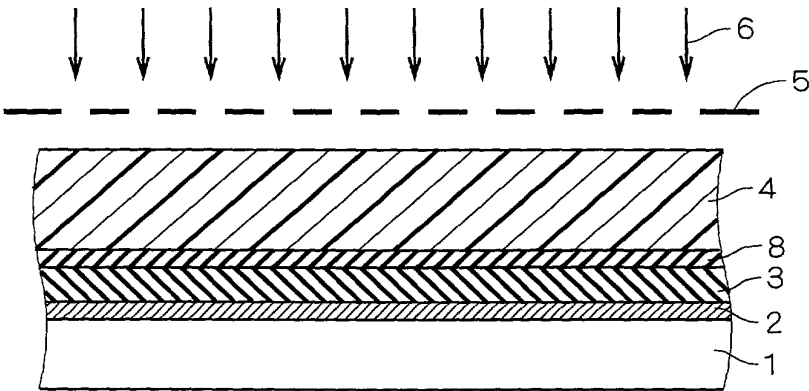
F I G . 15



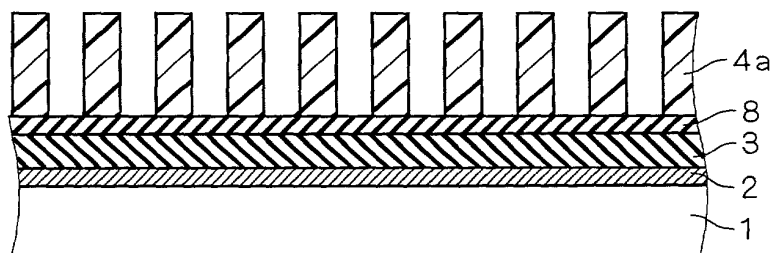
F I G . 16



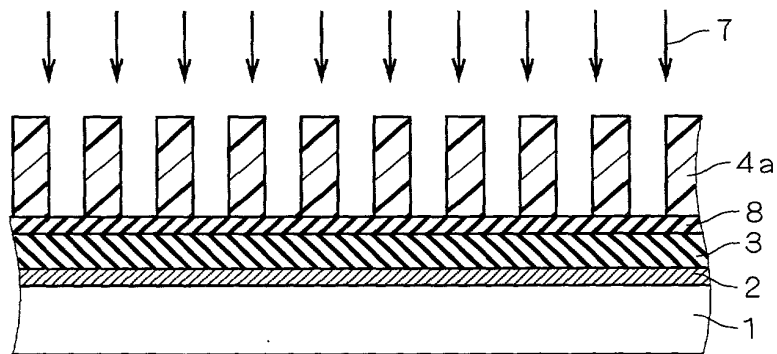
F I G . 17



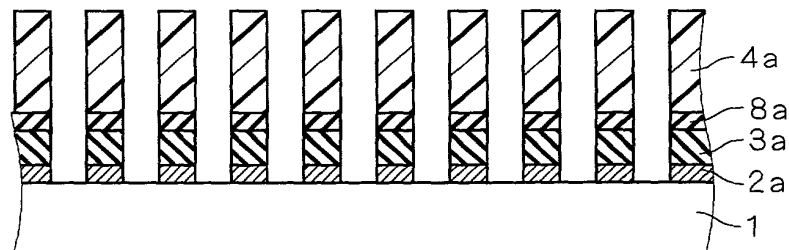
F I G . 18



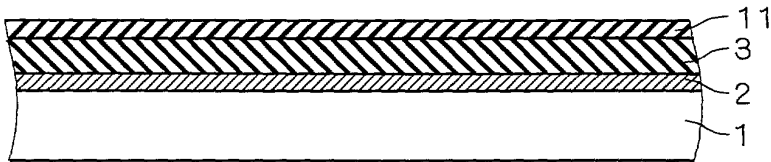
F I G . 19



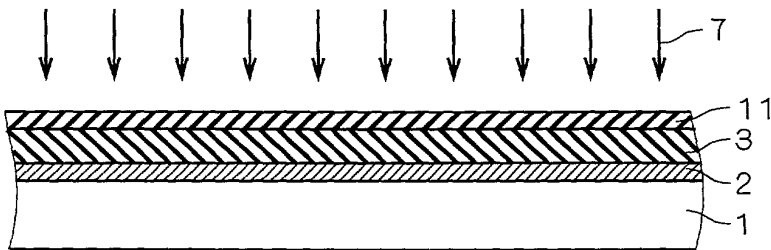
F I G . 20



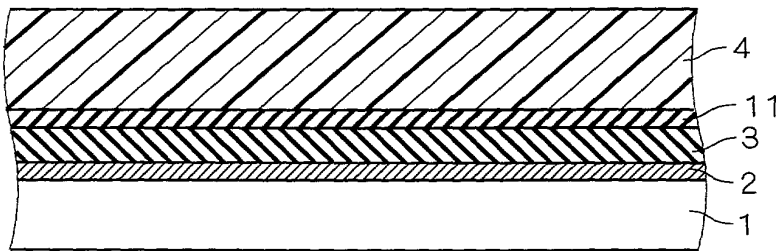
F I G . 21



F I G . 22

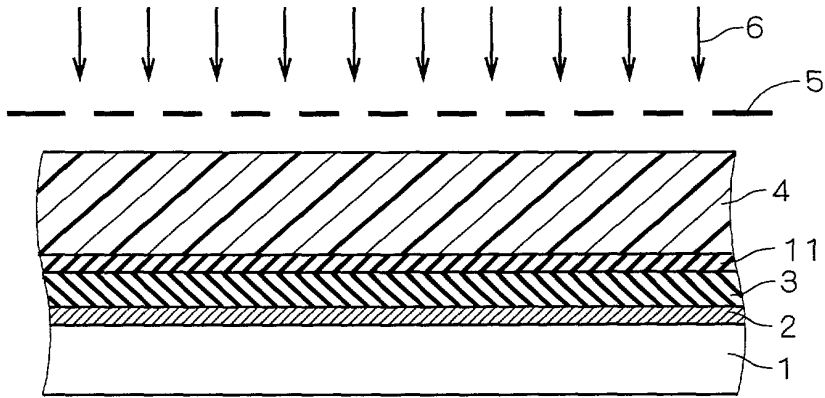


F I G . 23

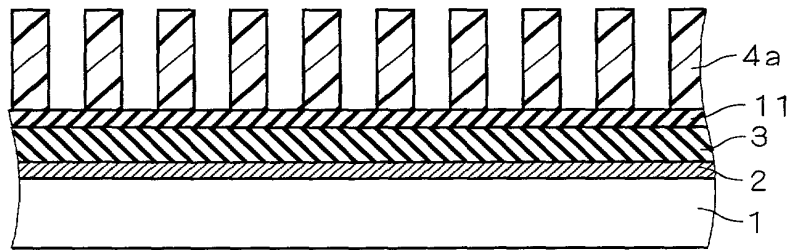


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10/22/00 9:05:16 AM

F I G . 24



F I G . 25



F I G . 26

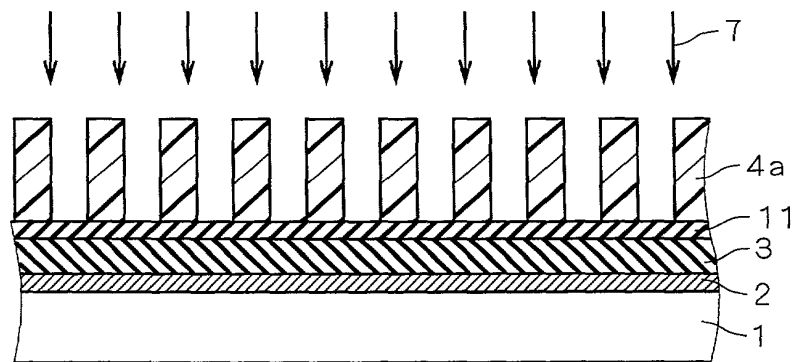
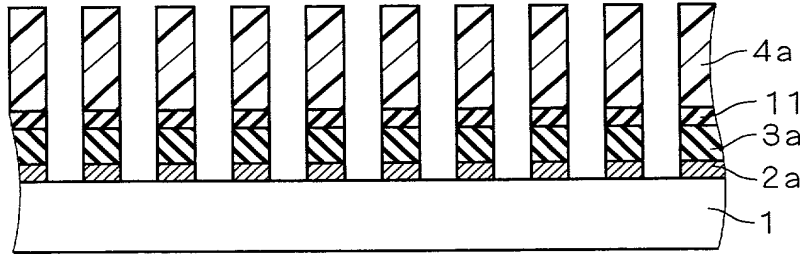
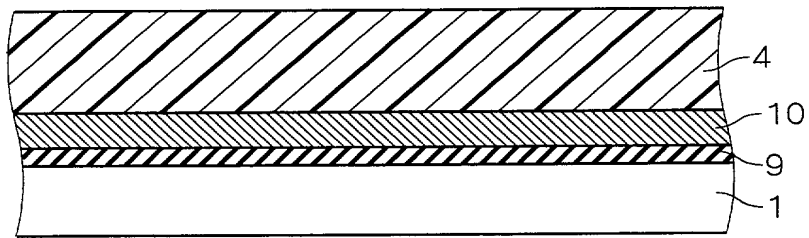


FIG. 24

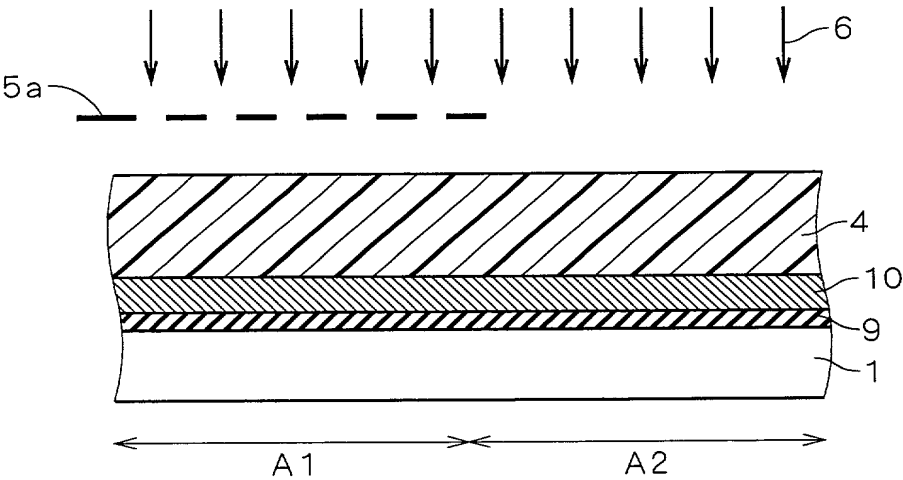
F I G . 27



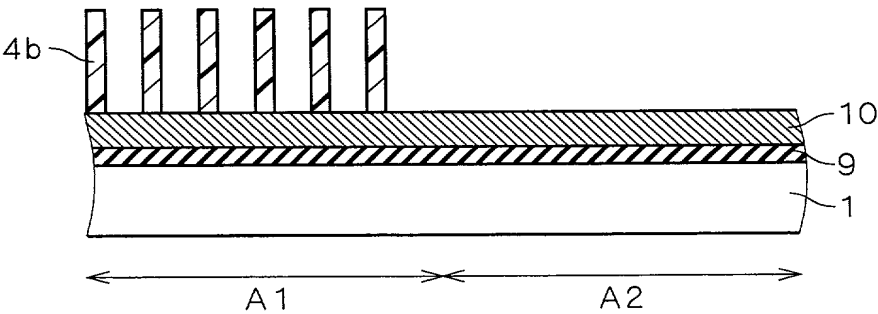
F I G . 28



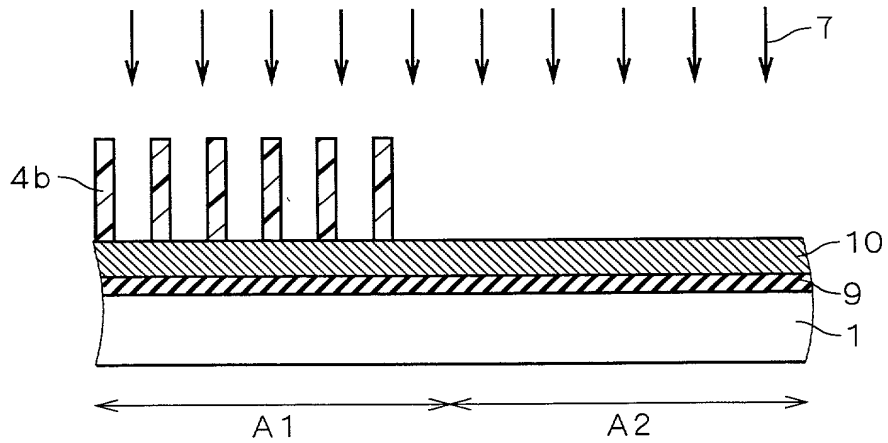
F I G . 2 9



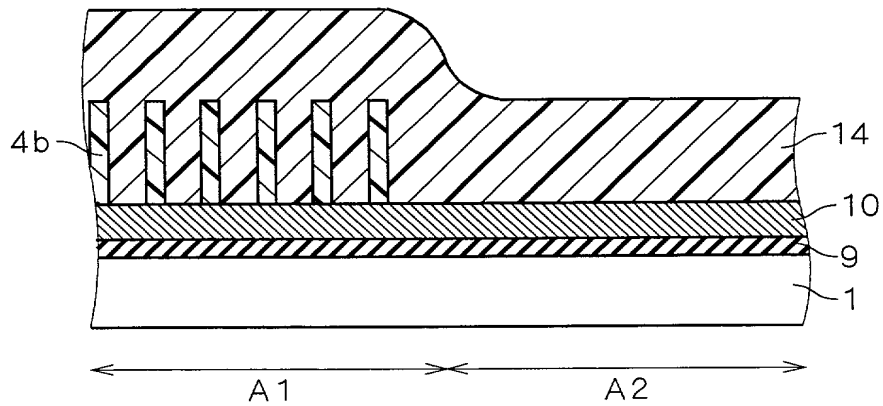
F I G . 3 0



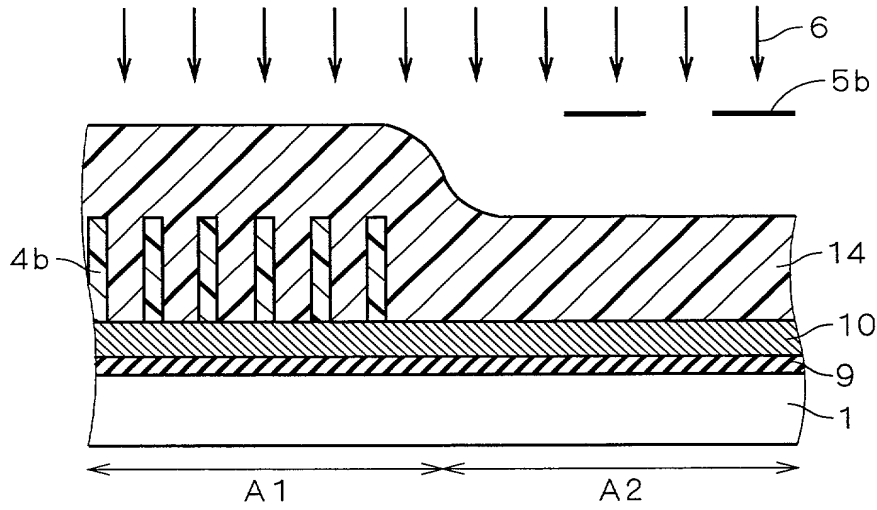
F I G . 3 1



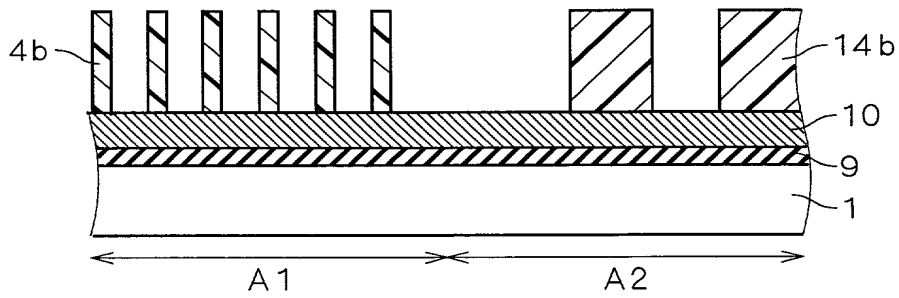
F I G . 3 2



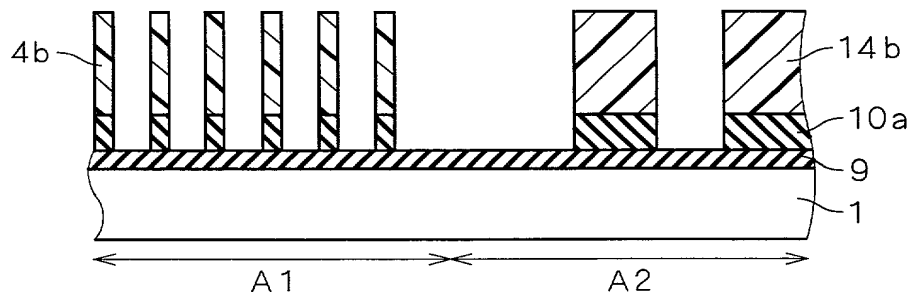
F I G . 33



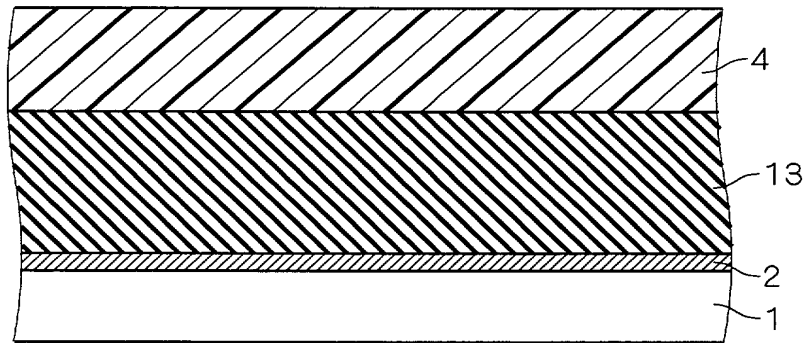
F I G . 34



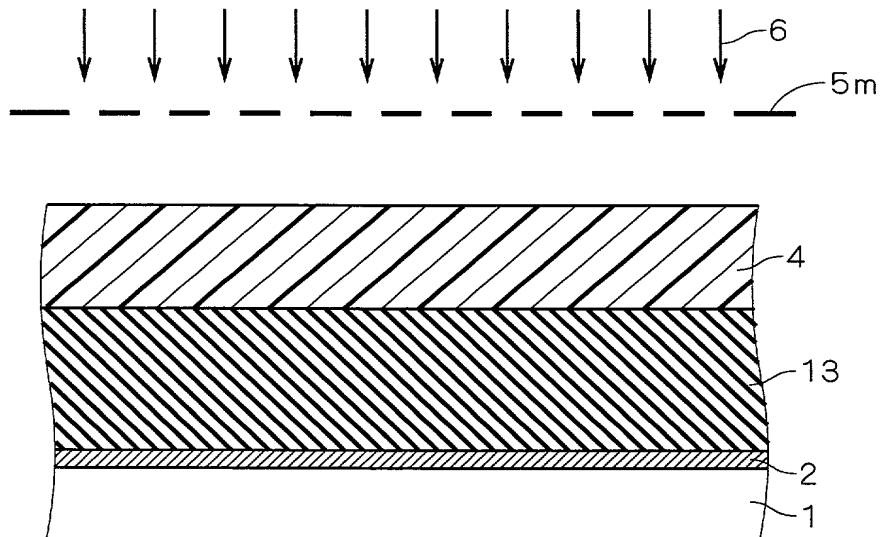
F I G . 35



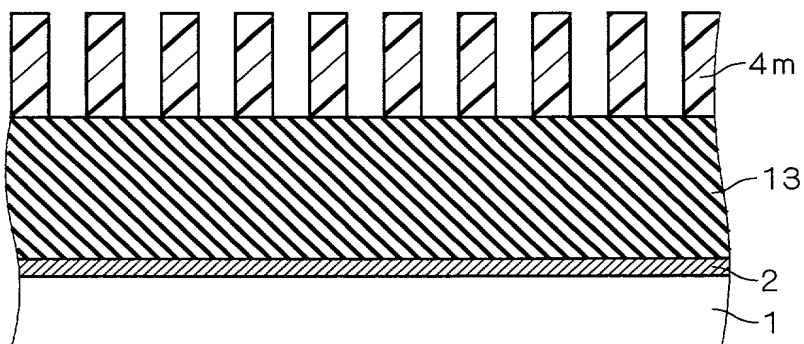
F I G . 3 6



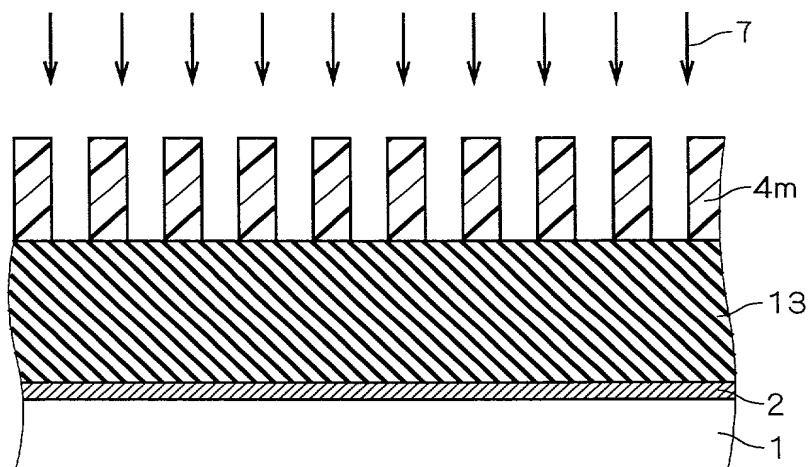
F I G . 3 7



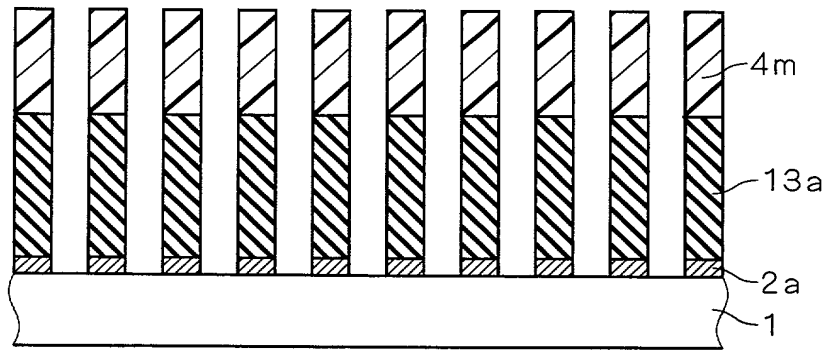
F I G . 3 8



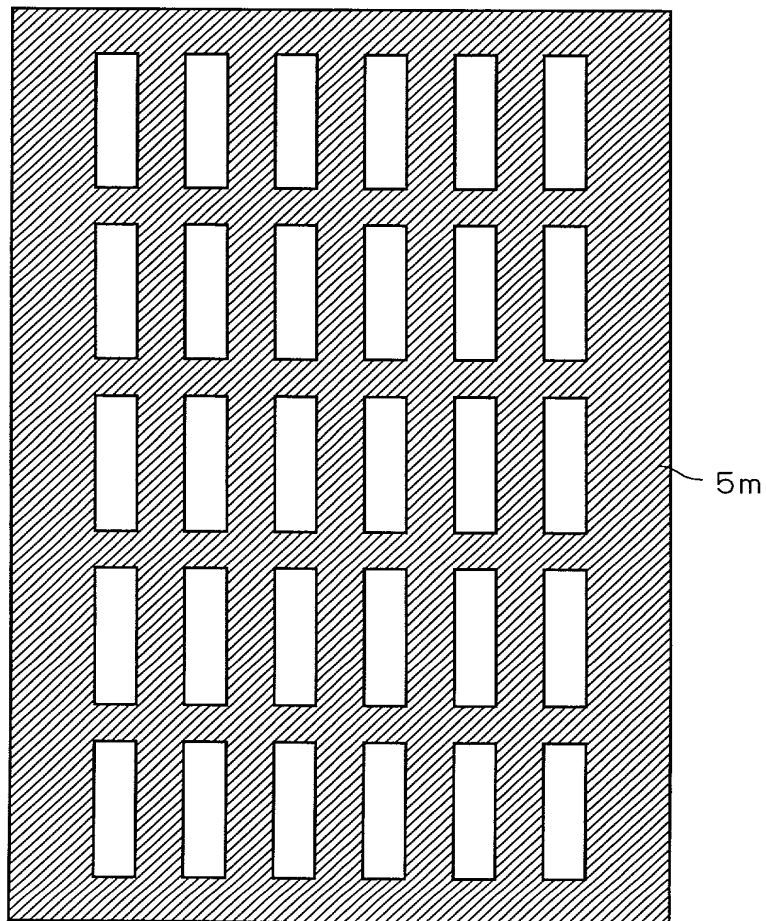
F I G . 3 9



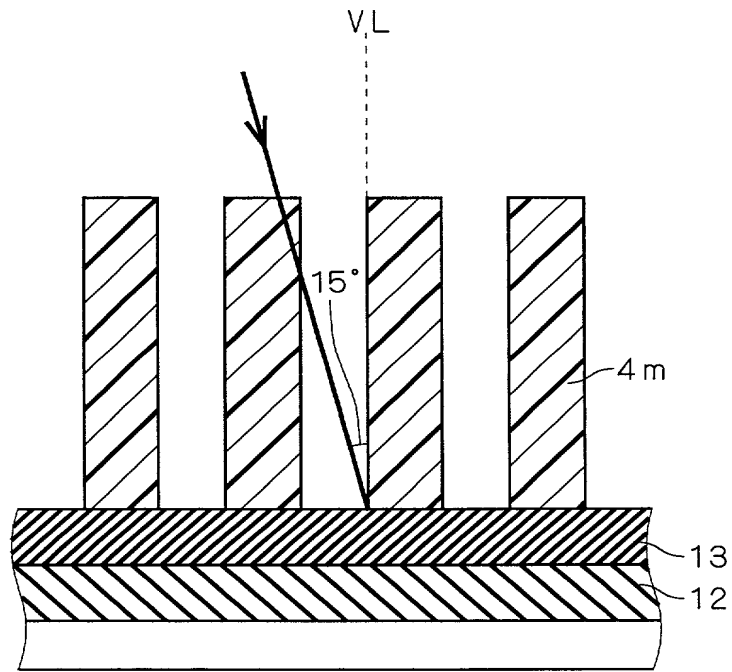
F I G . 4 0



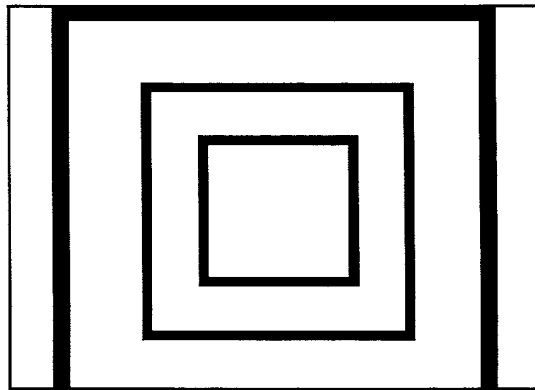
F I G . 4 1



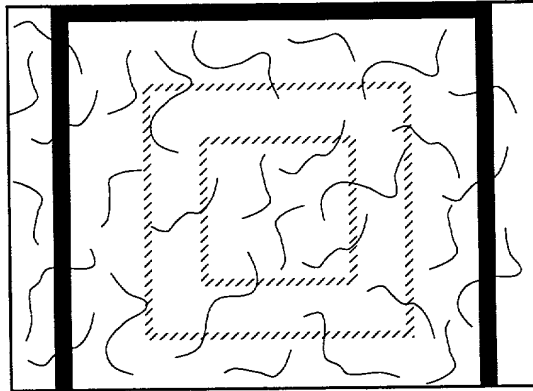
F I G . 4 2



F I G . 4 3



F I G . 4 4



F I G . 4 5

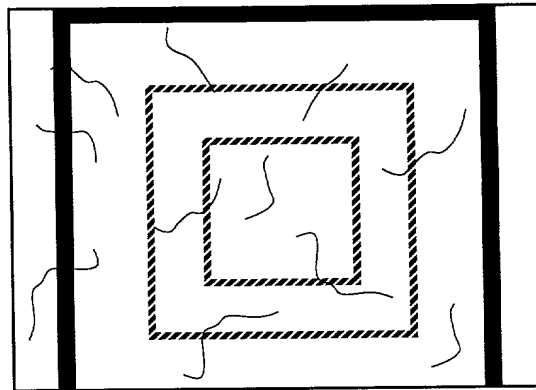


FIG. 46

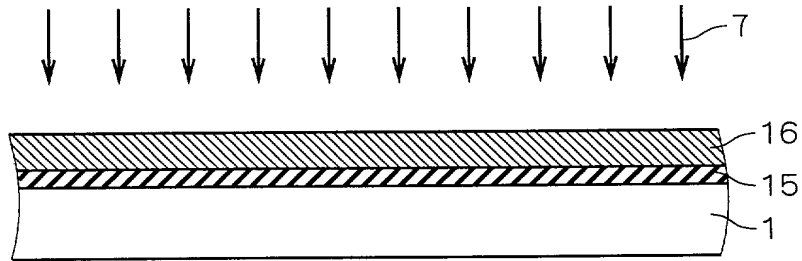


FIG. 47

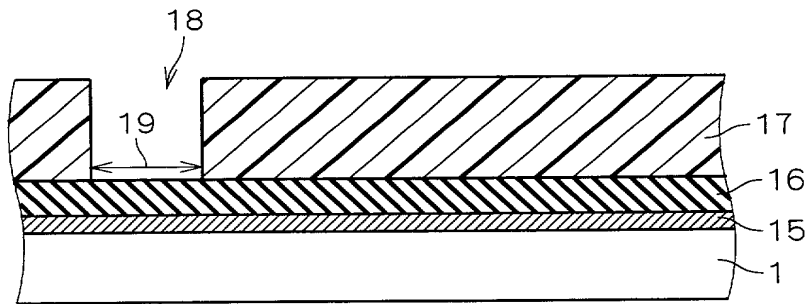
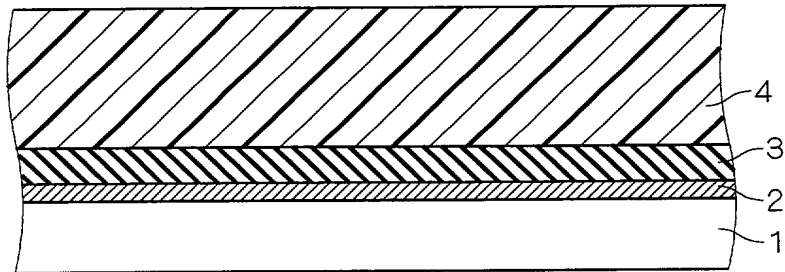
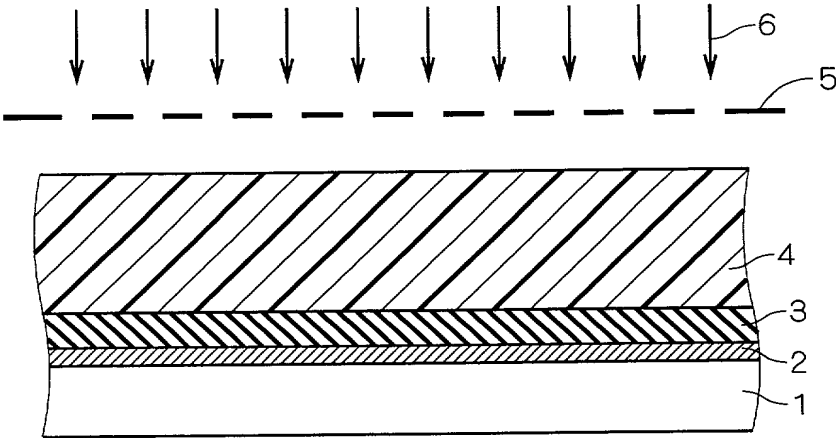


FIG. 48

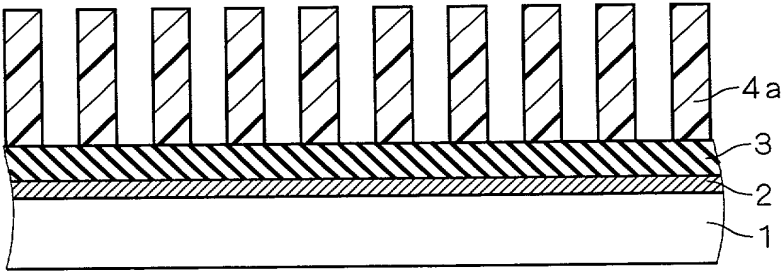


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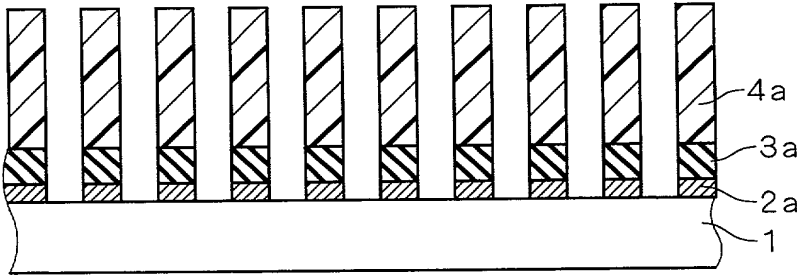
F I G . 49



F I G . 50



F I G . 51



F I G . 52

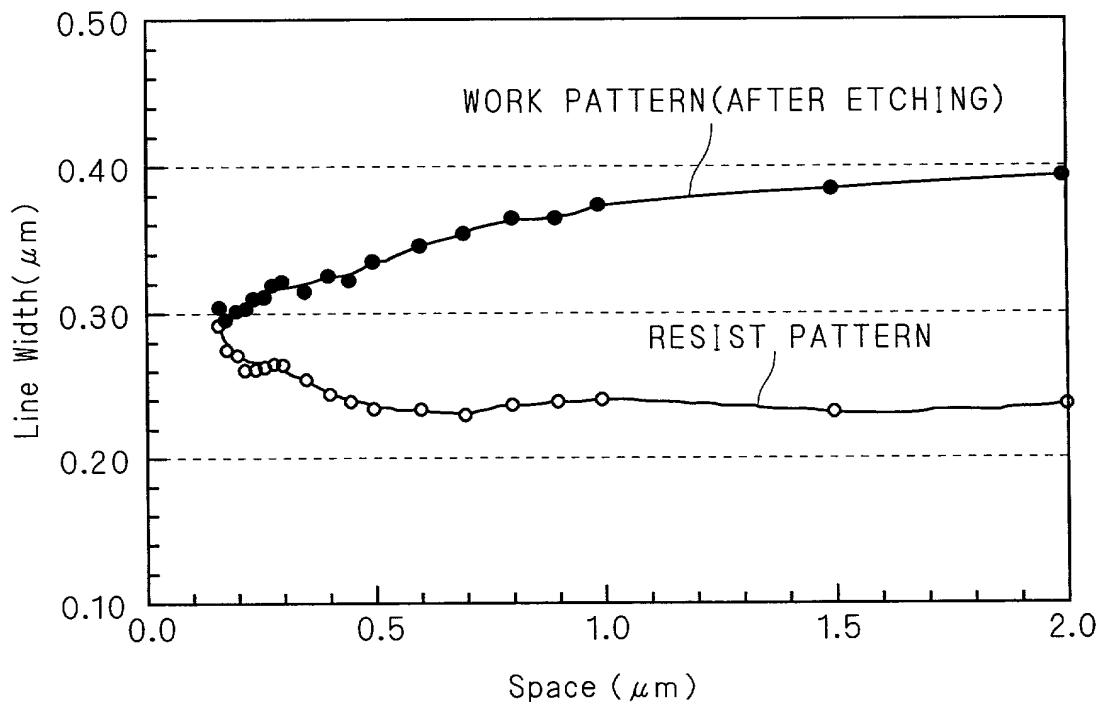


FIG. 53

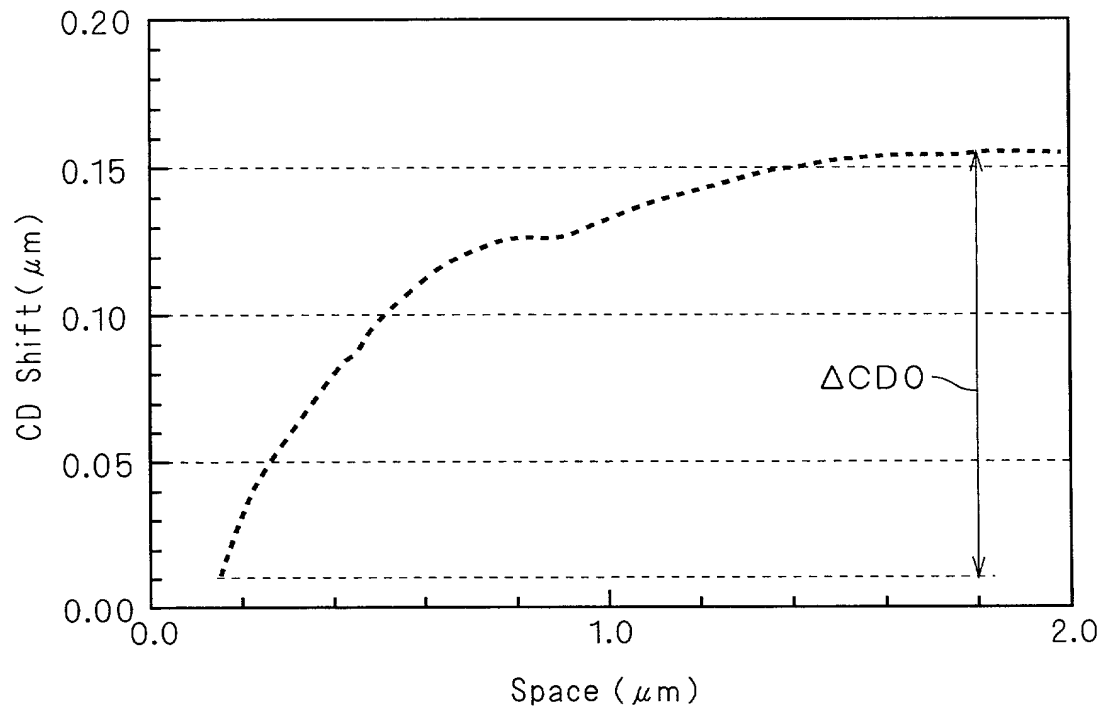
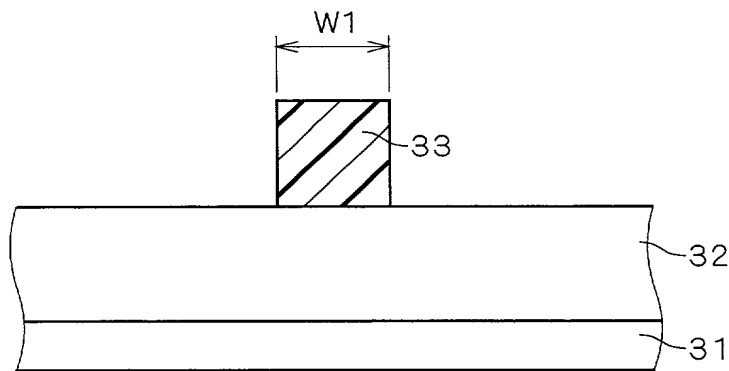
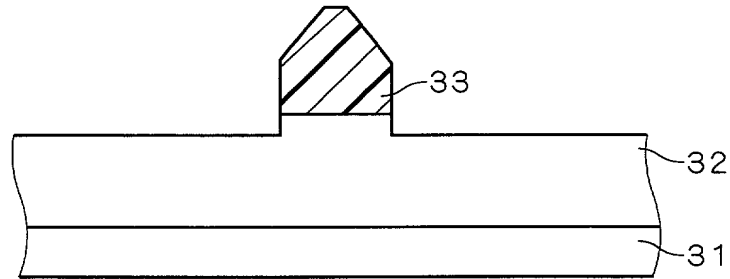


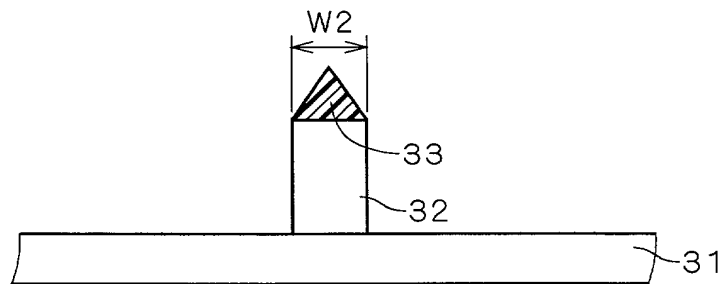
FIG. 54



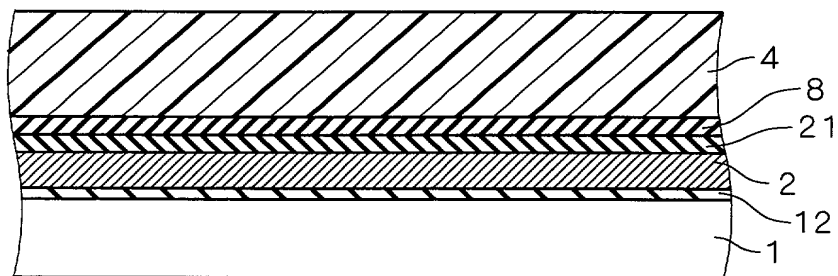
F I G . 55



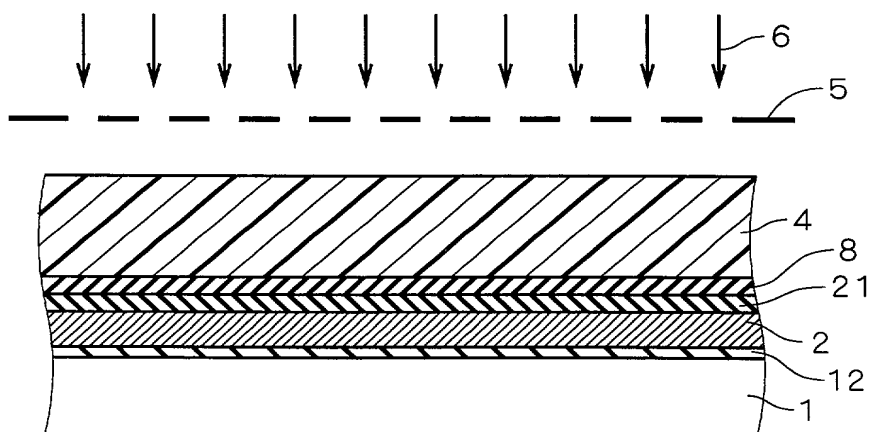
F I G . 56



F I G . 57



F I G . 58



F I G . 59

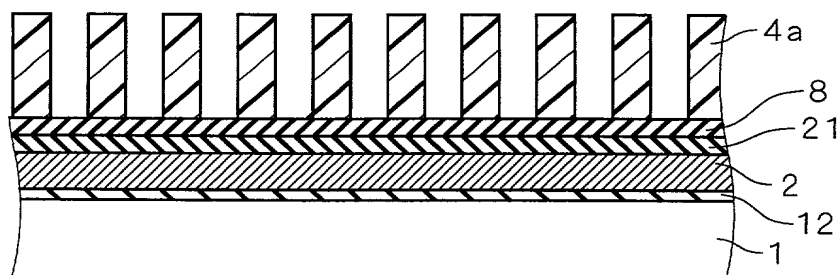
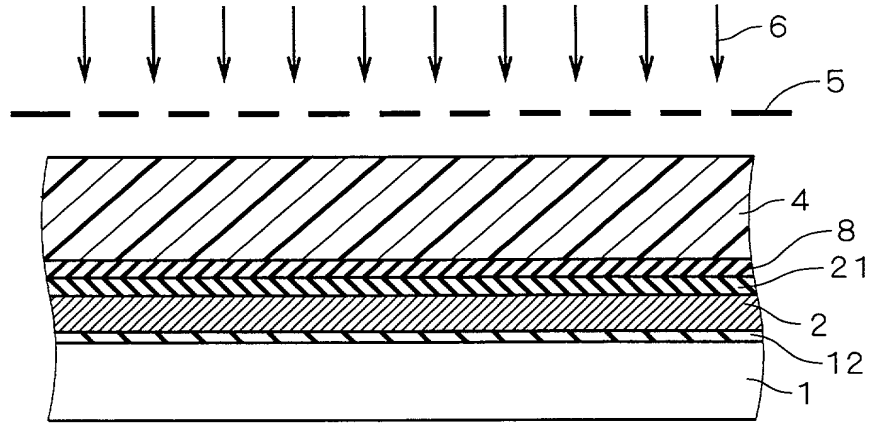


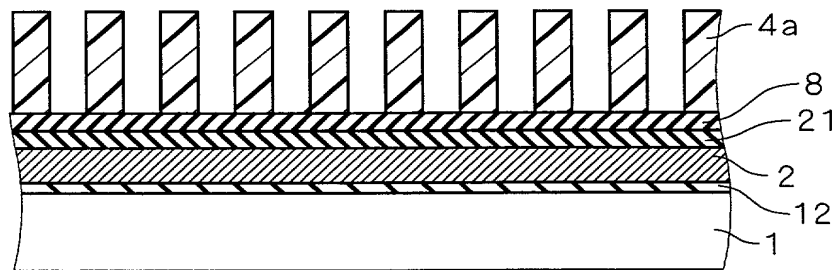
Figure 1 is a cross-sectional view of a semiconductor device 100. The device includes a substrate 1, a thin layer 12, and a series of vertical pillars. Each pillar consists of a bottom layer 2a, a middle layer 21a with a central opening, and a top layer 4a. The pillars are separated by a material 8a.

A cross-sectional view of a multi-layered material structure. The structure consists of several distinct layers, each with a unique hatching pattern. From top to bottom, the layers are: a thick layer with diagonal hatching (top-left to bottom-right), a thin layer with a wavy, zigzag pattern, a thin layer with diagonal hatching (bottom-left to top-right), a thin layer with a wavy, zigzag pattern, and a thick layer with diagonal hatching (top-left to bottom-right). The layers are labeled with reference numerals: 4 for the top layer, 8 for the first wavy layer, 21 for the second wavy layer, 2 for the third wavy layer, 12 for the fourth wavy layer, and 1 for the bottom layer.

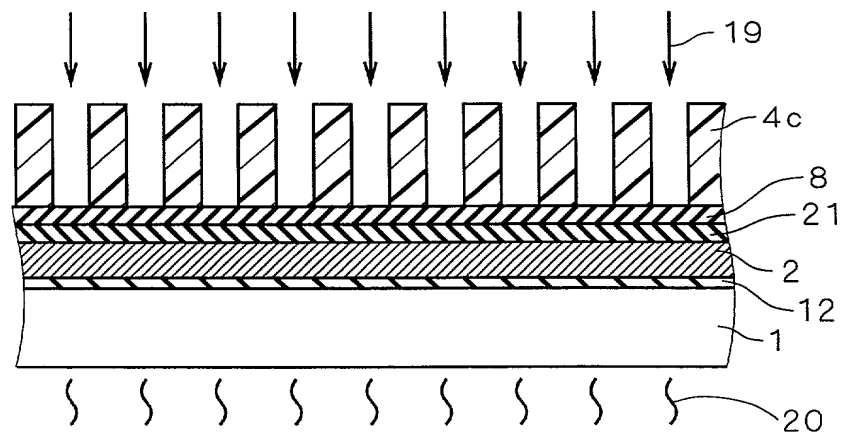
F I G . 63



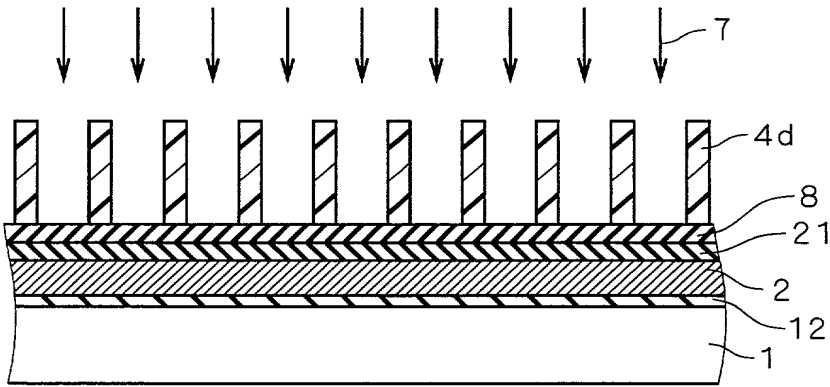
F I G . 64



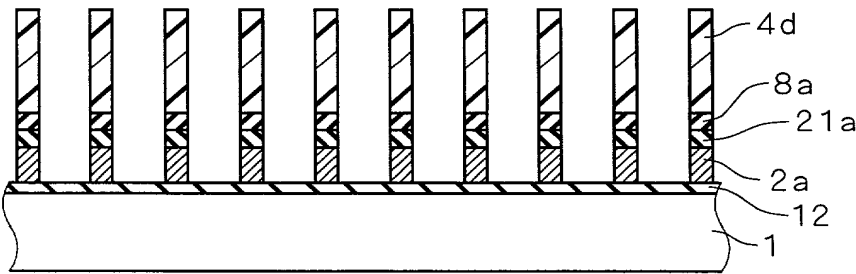
F I G . 65



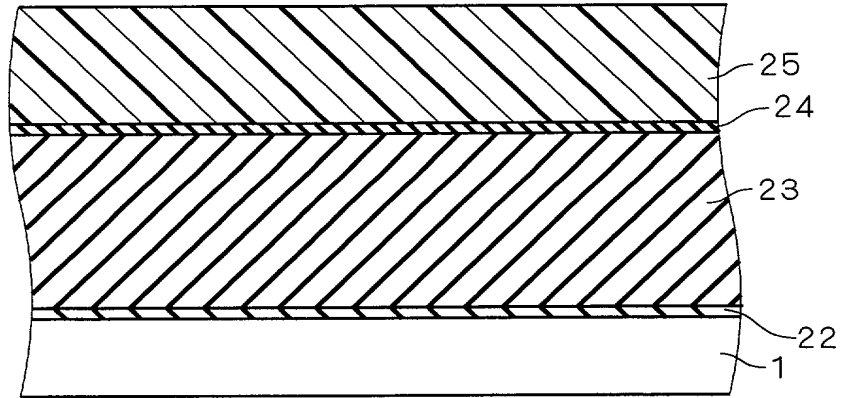
F I G . 6 6



F I G . 6 7



F I G . 68



F I G . 69

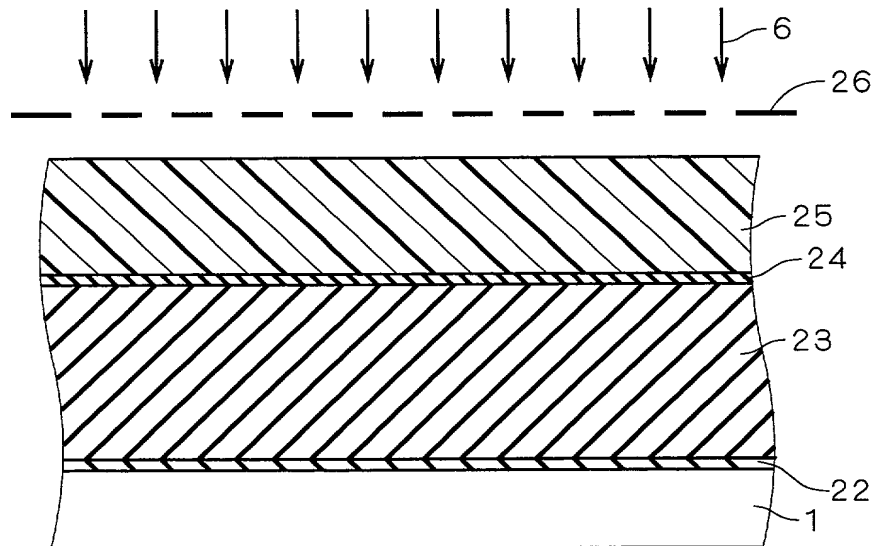


FIG. 70

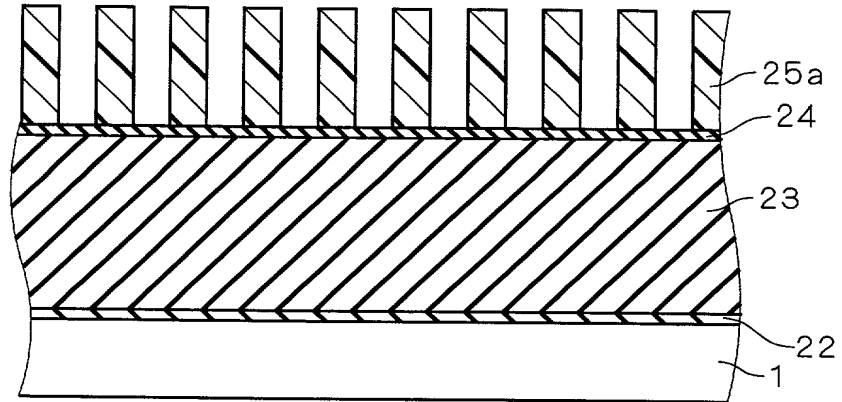
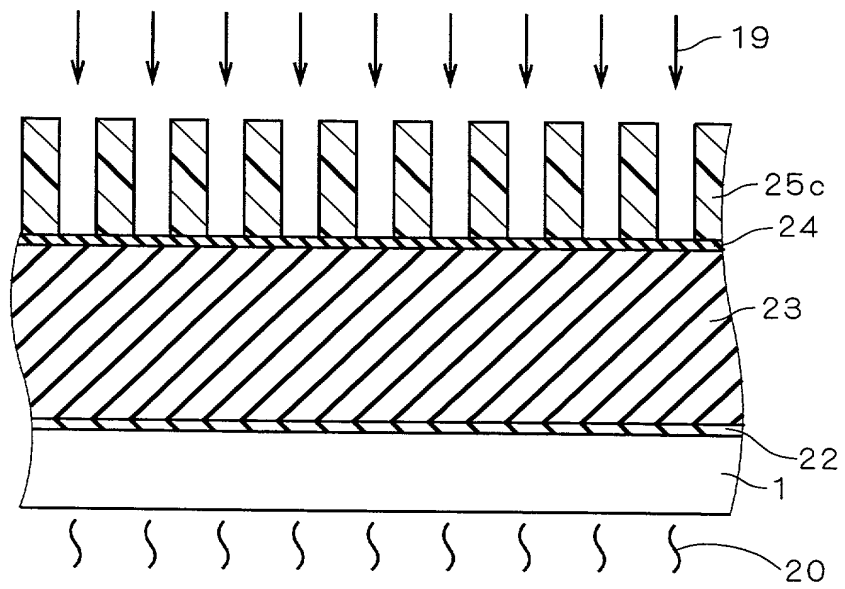
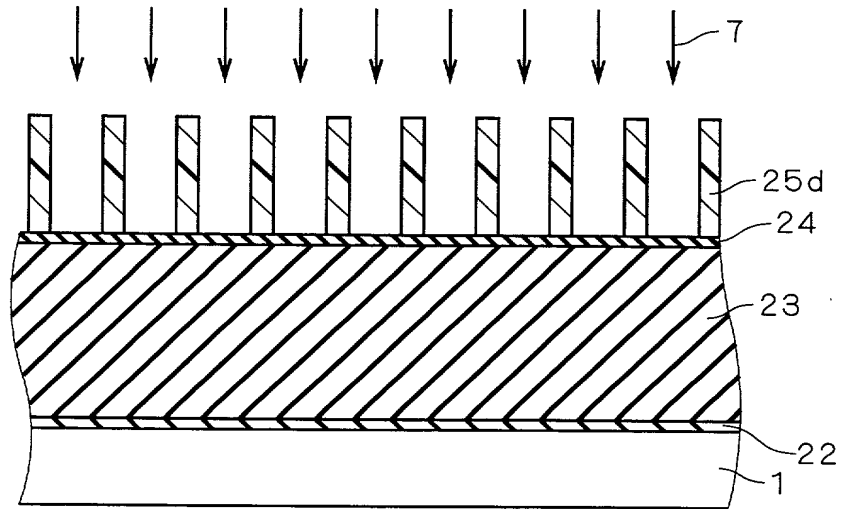


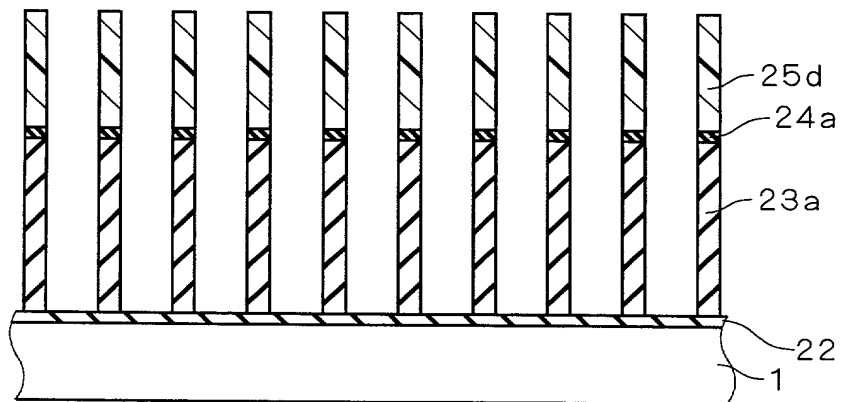
FIG. 71



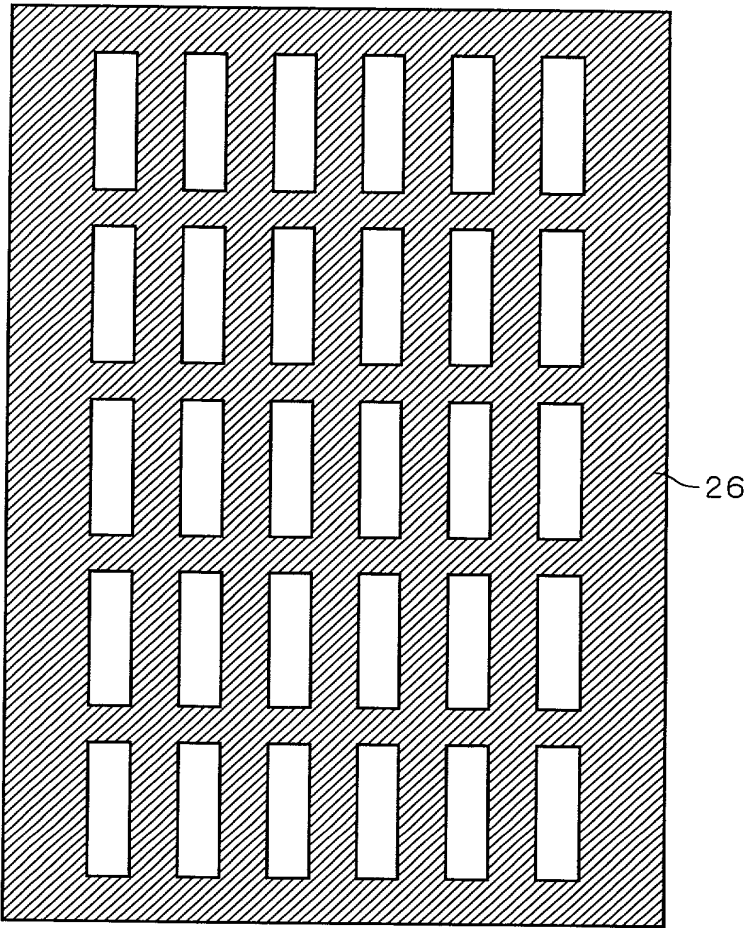
F I G . 7 2



F I G . 7 3



F I G . 7 4



F I G . 7 5

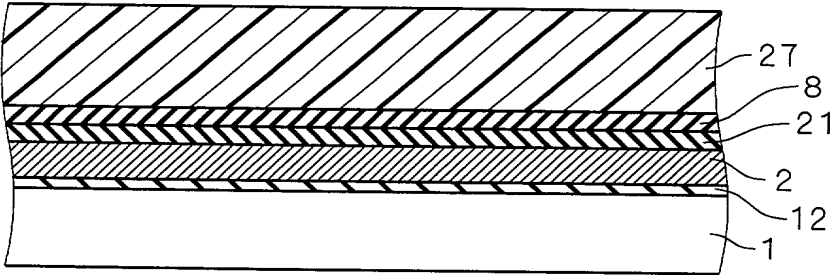


FIG. 76

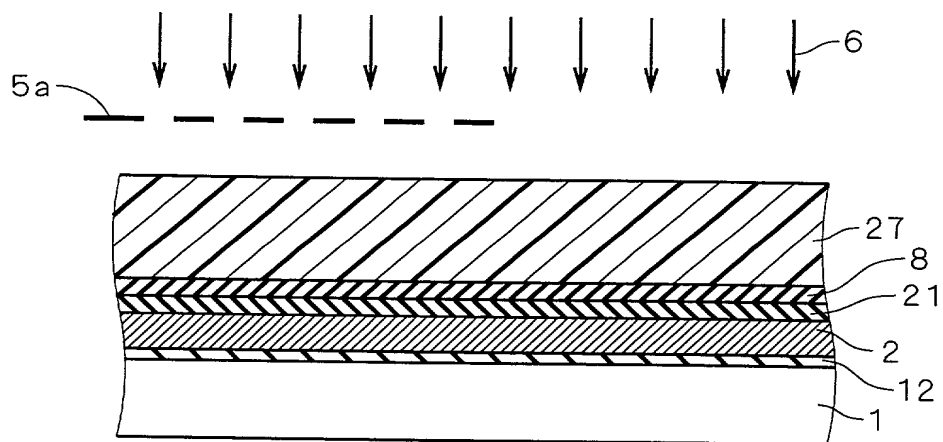
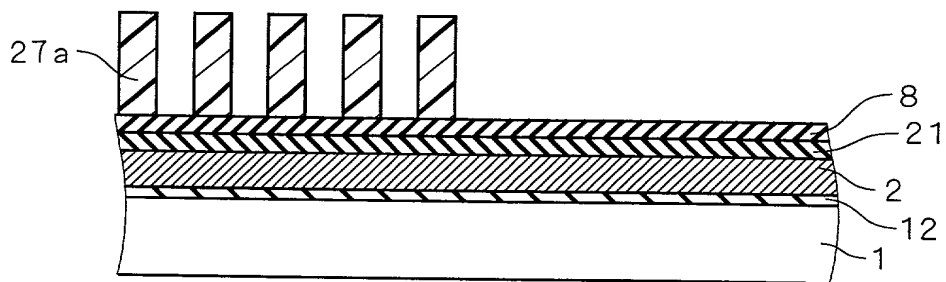
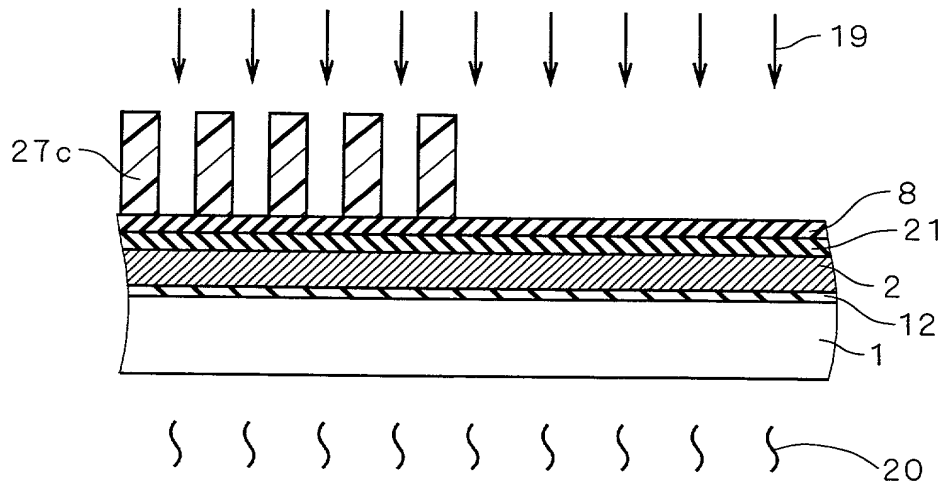


FIG. 77



F I G . 78



F I G . 79

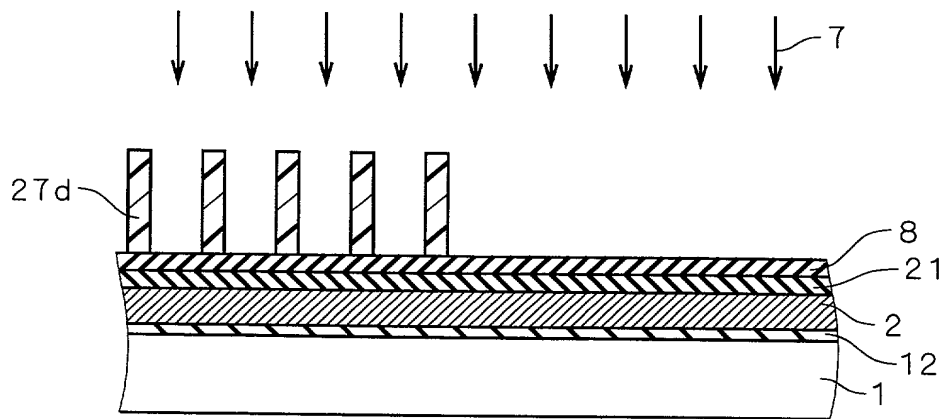


FIG. 80

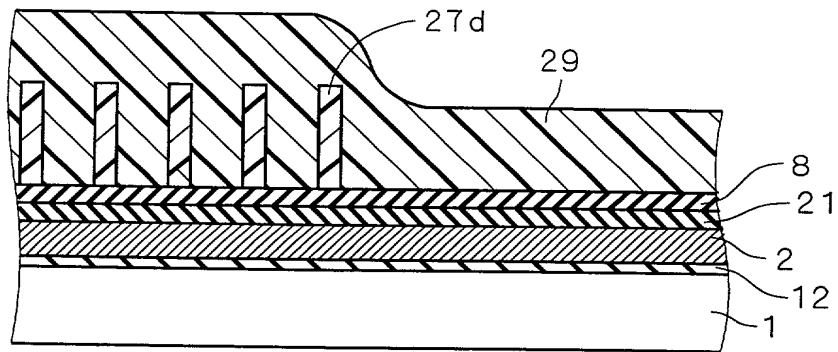


FIG. 81

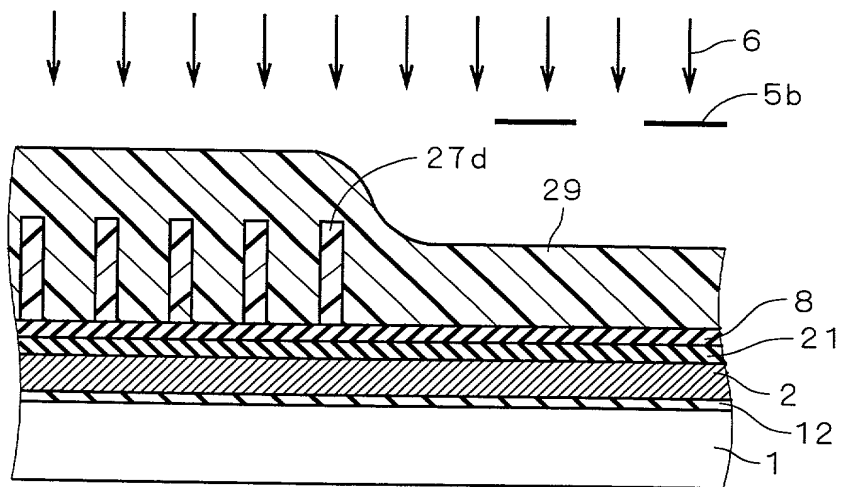


FIG. 82

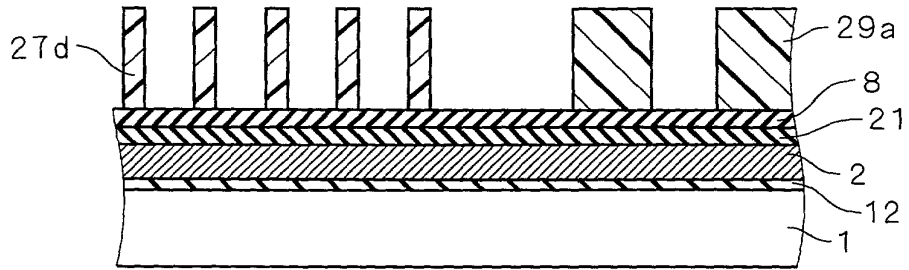


FIG. 83

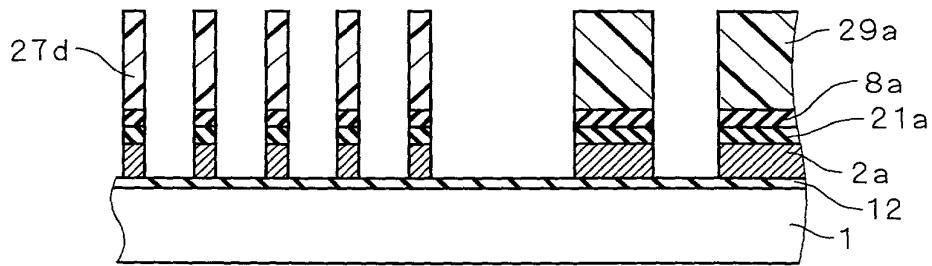
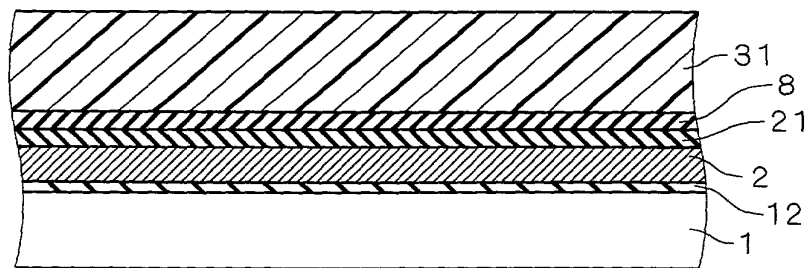
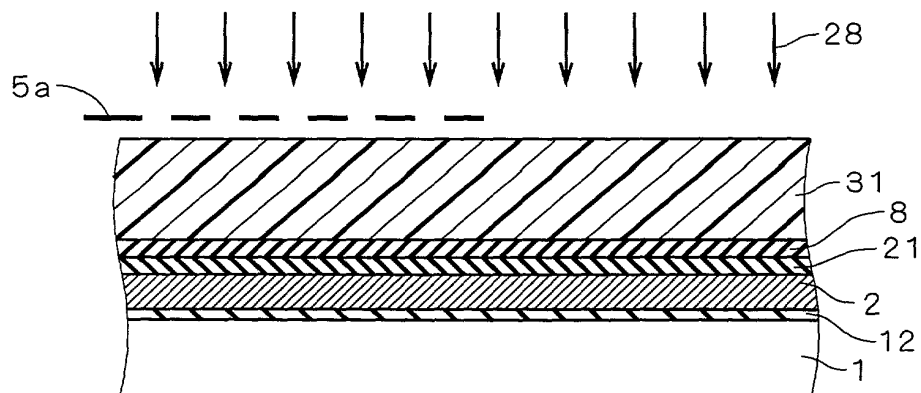


FIG. 84



F I G . 8 5



F I G . 8 6

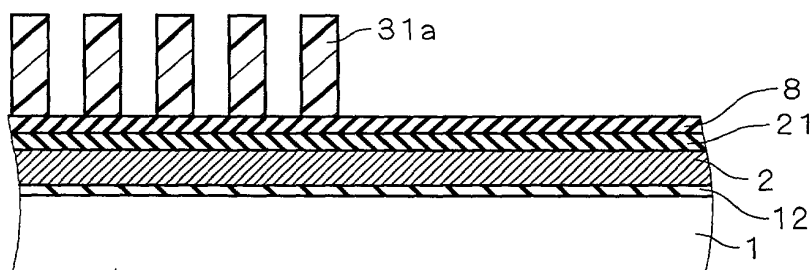


FIG. 87

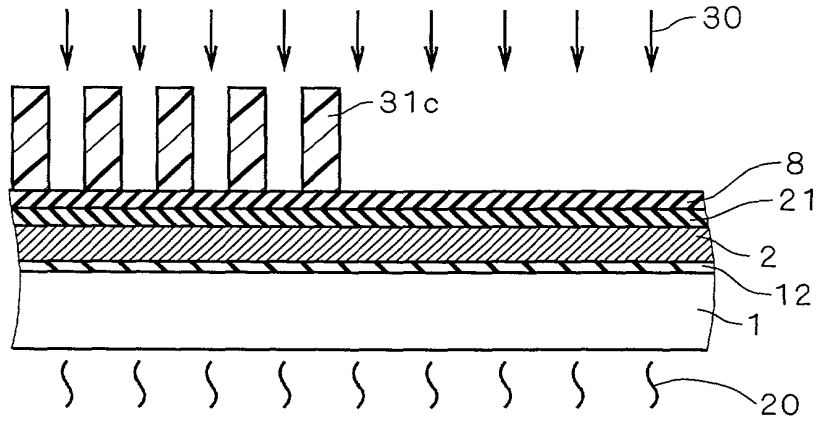


FIG. 88

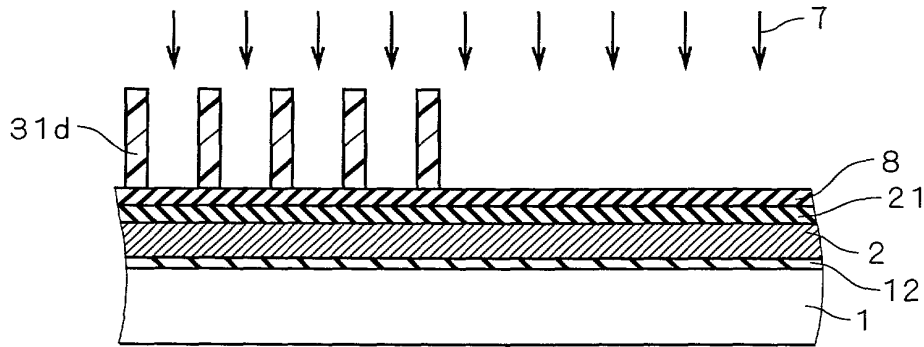
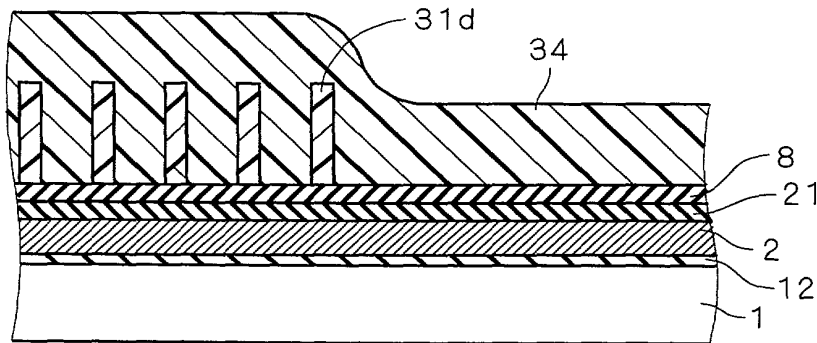
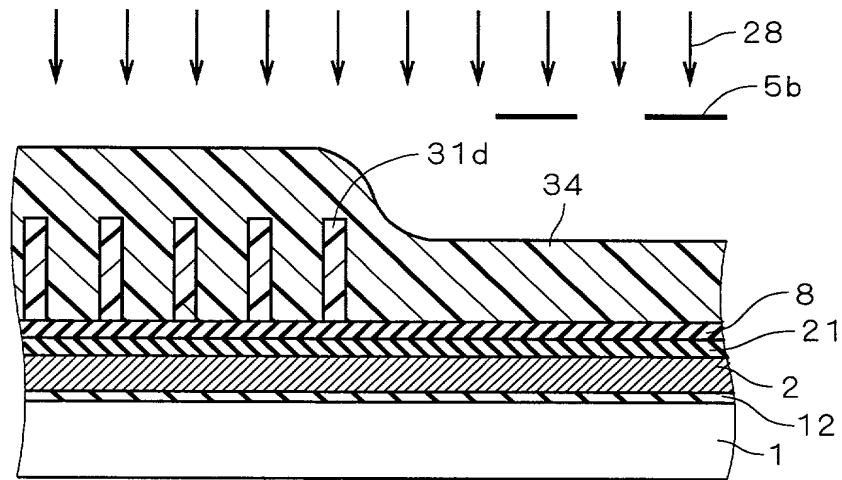


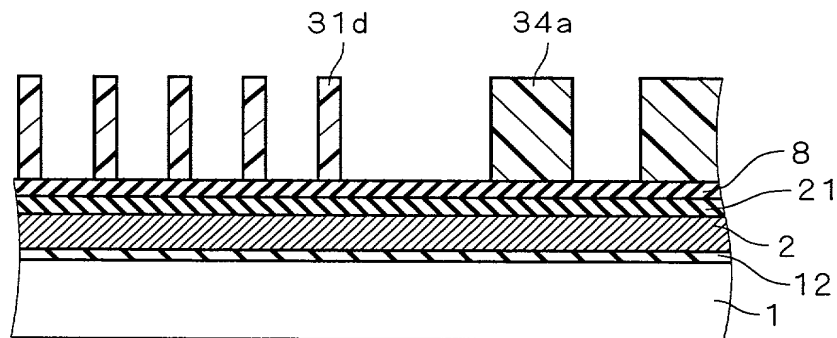
FIG. 89



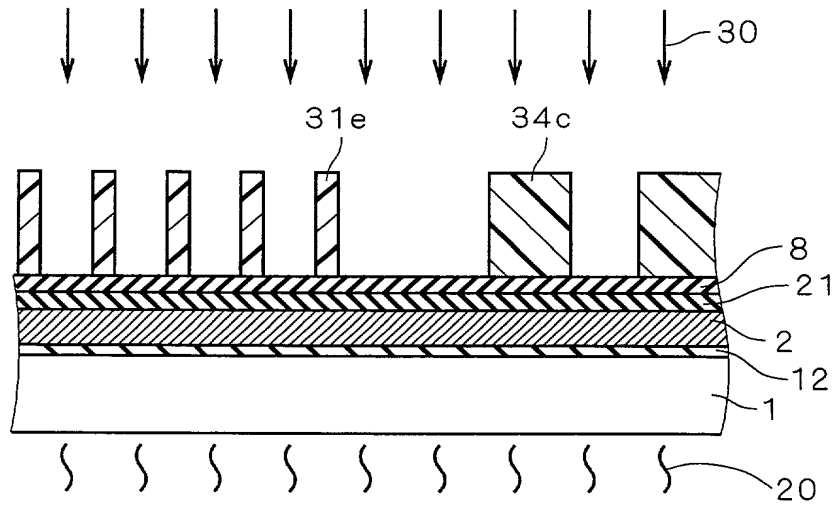
F I G . 90



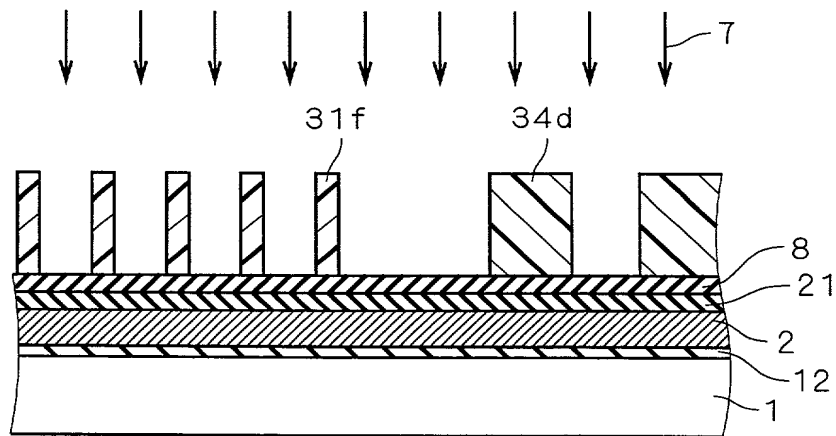
F I G . 91



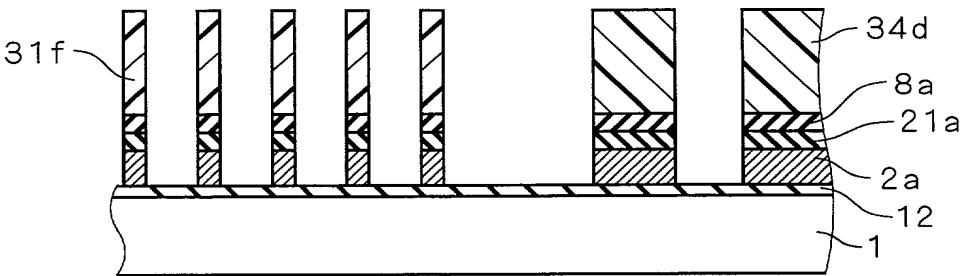
F I G . 92



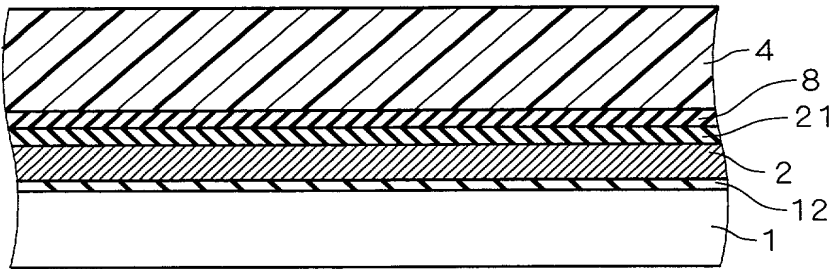
F I G . 93



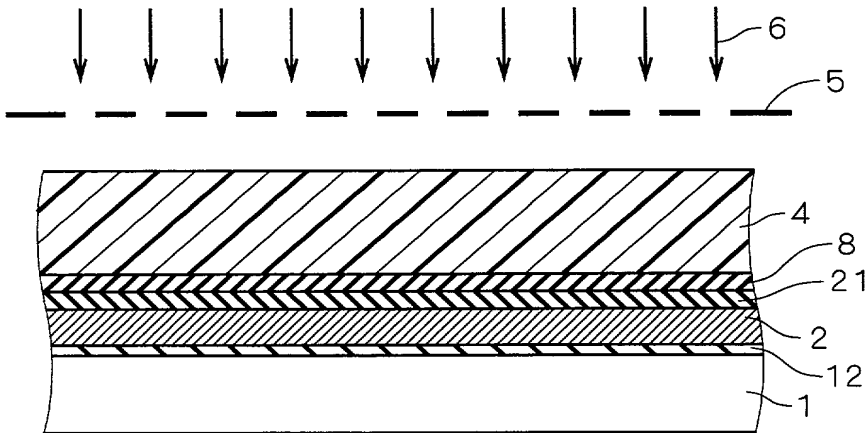
F I G . 94



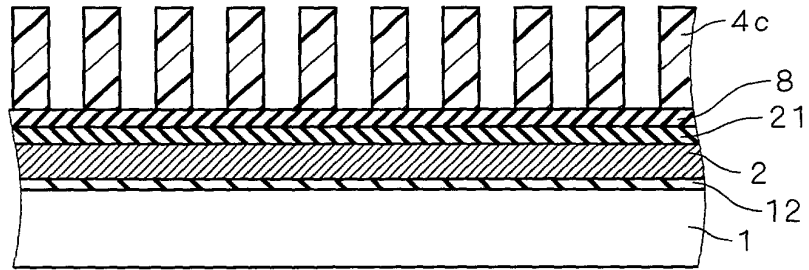
F I G . 95



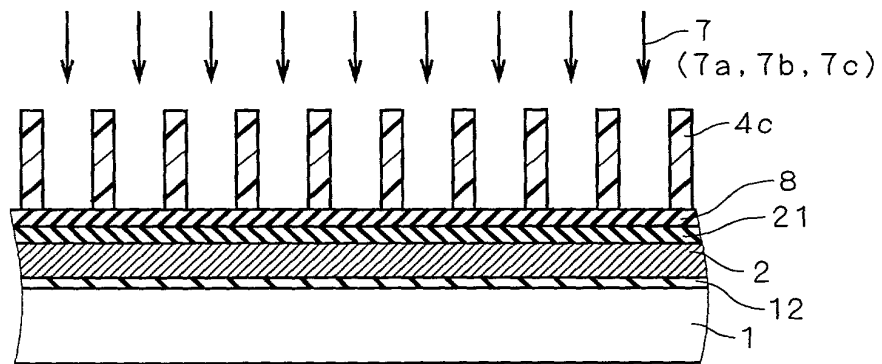
F I G . 96



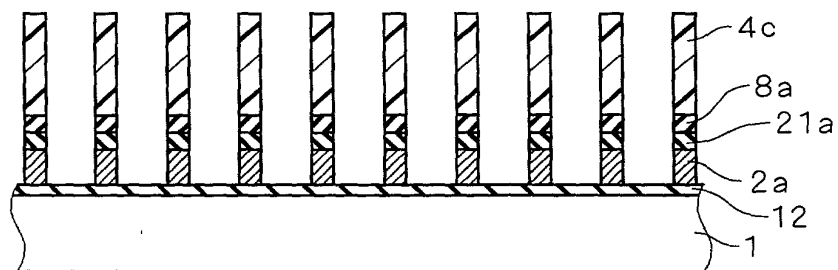
F I G . 97



F I G . 98



F I G . 99



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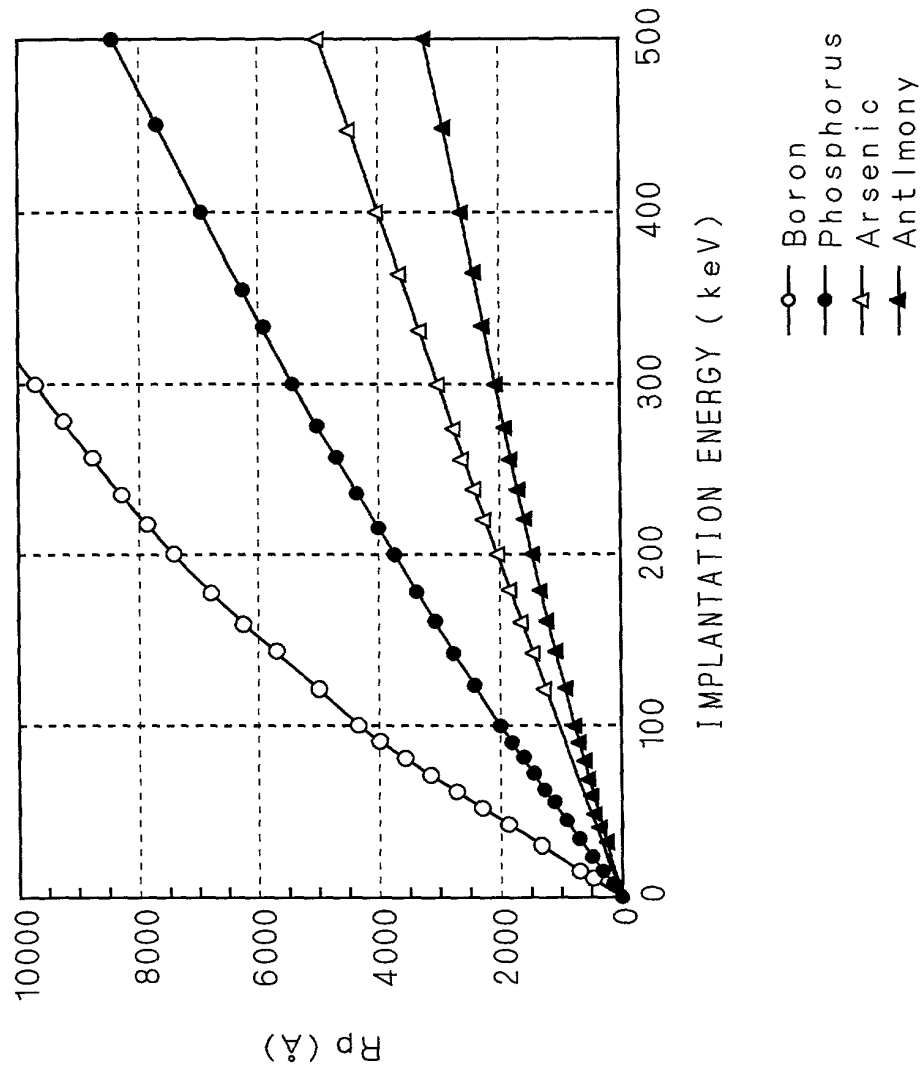


FIG. 100